

LIST OF THE STONEFLIES (PLECOPTERA) OF WEST VIRGINIA¹

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ABSTRACT: Examination of museum and literature records and personnel collections have resulted in a list of 106 species comprising 37 genera from nine families of stoneflies. Nine new state records are added to the plecopteran fauna of West Virginia.

Stoneflies represent an integral component of the zoobenthos in the streams of West Virginia. Presently, 106 species comprising 37 genera and nine families are recorded for the state. Nine state records are added to the list of stoneflies. The classification system of Illies (1966) is followed in this paper; he listed 9 families, 57 genera and 183 species of stoneflies known to occur in the eastern United States. Of these, 65 percent of the genera and 58 percent of the species have been found in West Virginia. The abundance of stonefly species probably resulted from the Pleistocene glaciers which left West Virginia untouched and therefore an "island refuge" for stoneflies. In North America, only two other states and one province have more than 100 species recorded; Montana - 119 (Gaufin and Ricker, 1974), Virginia - 116 (Kondratieff and Voshell, 1979) and Quebec - 103 (Harper, 1971; Harper and Roy, 1974).

Several range extensions are noted. *Alloperla chloris* Frison (CT, NY, VA, QUEBEC), *Leuctra tenella* Provancher (ME, MN, NEW BRUNSWICK, NJ, NY, NOVA SCOTIA, PA) and *Utaerla gaspesiana* Harper and Roy (QUEBEC) have a southern range extension, while *Neoperla stewarti* Stark and Baumann (AR, KY, MS, OH, WI) has an eastern range extension. Information concerning drainage basins, streams, habitat, dates and sex are recorded in the West Virginia Benthological Survey at Marshall University.

A few investigators, including Hissom and Tarter (1976), Farmer and Tarter (1976) and Steele and Tarter (1977), have reported detailed investigations on the distribution of stoneflies in West Virginia. Other studies, including Baumann (1974), Claassen (1931), Frison (1935, 1942), Harper and Kirchner (1978), Illies (1966), Kirchner (1978), Needham and Claassen (1925), Ricker (1952), Ricker and Ross (1968, 1969, 1975), Ross and Ricker (1964, 1971), Stark and Baumann (1978), Stark and Gaufin (1976), Tarter (1976), Tarter et al. (1975, 1976, 1977)

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and Zwick (1973), have noted stonefly records for the state.

Holotypes of the following species are from West Virginia: *Allocapnia curisoea* Frison 1942, *A. frisoni* Ross and Ricker 1964, *A. loshada* Ricker 1952, *Alloperla aracoma* Harper and Kirchner 1978, *Taenionema atlanticum* Ricker and Ross 1975 and *Taeniopteryx ugola* Ricker and Ross 1968.

Order Plecoptera
Suborder Arctoperlaria
Group Euholognatha
Superfamily Nemouroidea
Family Leuctridae
Subfamily Leuctrinae

Leuctra alexanderi Hanson
L. biloba Claassen
L. carolinensis Claassen
L. duplicata Claassen
L. ferruginea (Walker)
L. maria Hanson
L. sibleyi Claassen

**L. tenella* Provancher
L. tenuis (Pictet)
L. truncata Claassen
Paraleuctra sara (Claassen)
Zealeuctra claasseni (Frison)
Z. fraxina Ricker and Ross

Family Taeniopterygidae
Subfamily Brachypterinae

Bolotoperla rossi (Frison)
Strophopteryx appalachia Ricker and
Ross

S. fasciata (Burmeister)
Taenionema atlanticum Ricker and Ross

Subfamily Taeniopteryginae

Taeniopteryx burksi Ricker and Ross
T. maura (Pictet)
T. metequi Ricker and Ross

T. nivalis (Fitch)
T. parvula Banks
T. ugola Ricker and Ross

Family Nemouridae
Subfamily Amphinemurinae

Amphinemura delosa (Ricker)
A. nigrutta (Provancher)

**A. wui* (Claassen)

Subfamily Nemourinae

Ostrocerca albidipennis (Walker)
O. complexa (Claassen)
O. prolongata (Claassen)
O. truncata (Claassen)

**Prostoia completa* (Walker)
P. similis (Hagen)
Soyedina carolinensis (Claassen)
S. vallicularia (Wu)

Family Capniidae

Allocapnia curisoa Frison
A. forbesi Frison
A. frisoni Ross and Ricker
A. granulata (Claassen)
A. indianae Ricker
A. loshada Ricker
A. maria Hanson
A. mystica Frison

A. nivicola (Fitch)
A. ohioensis Ross and Ricker
A. pygmaea (Burmeister)
A. recta (Claassen)
A. rickeri Frison
A. vivipara (Claassen)
A. zola Ricker
Paracapnia angulata Hanson
P. opis (Newman)

Group Systellognatha
 Superfamily Pteronarcyioidea
 Family Pteronarcyidae

Allonarcys biloba (Newman)
A. comstocki (Smith)

A. proteus (Newman)
Pteronarcys dorsata (Say)

Family Peltoperlidae
 Subfamily Peltoperlinae

Peltoperla arcuata Needham

P. maria Needham and Smith

Superfamily Perloidea
 Family Perlodidae
 Subfamily Isoperlinae

Isoperla bilineata (Say)
I. burksi Frison
I. clio (Newman)
I. cotta Ricker
I. dicala Frison
I. gibbsae Harper
I. holochlora (Klapalek)

I. lata Frison
I. marlynia Needham and Claassen
I. namata Frison
I. orata Frison
I. richardsoni Frison
I. similis (Hagen)
I. transmarina (Newman)

Subfamily Perlodinae

Cultus decisus (Walker)
Diploperla robusta Stark and Gaufin
Helopicus subvarians (Banks)
Isogenoides hansonii (Ricker)

Malirekus hastatus (Banks)
Remenus bilobatus (Needham and Claassen)
Yugus arinus (Frison)
Y. bulbosus (Frison)

Family Chloroperlidae
Subfamily Chloroperlinae

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|---|---|
| <i>Alloperla aracoma</i> Harper and Kirchner
* <i>A. chloris</i> Frison
<i>A. imbecilla</i> (Say)
<i>A. usa</i> Ricker
<i>Hastaperla brevis</i> (Banks) | * <i>Rasvena terna</i> (Frison)
<i>Suwallia marginata</i> (Banks)
* <i>Sweltsa lateralis</i> (Banks)
<i>S. mediana</i> (Banks) |
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Subfamily Paraperlinae

- **Utaperla gaspesiana* Harper and Roy

Family Perlidae
Subfamily Acroneuriinae

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|---|---|
| <i>Acroneuria abnormis</i> (Newman)
* <i>A. arenosa</i> (Pictet)
<i>A. carolinensis</i> (Banks)
<i>A. evoluta</i> Klapalek
<i>A. filicis</i> Frison
<i>A. internata</i> (Walker) | <i>A. lycorias</i> (Newman)
<i>A. perplexa</i> Frison
<i>Eccoptera xanthenes</i> (Newman)
<i>Perlesta placida</i> (Hagen)
<i>P. frisoni</i> Banks
<i>Perlinella drymo</i> (Newman) |
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Subfamily Perlinae

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|--|---|
| <i>Neoperla choctaw</i> Stark and Baumann
* <i>N. stewarti</i> Stark and Baumann
<i>Paragnetina media</i> (Walker) | <i>P. immarginata</i> (Say)
<i>Phasganophora capitata</i> (Pictet) |
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*State record

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